

February 2005 through April 2005 Status Report

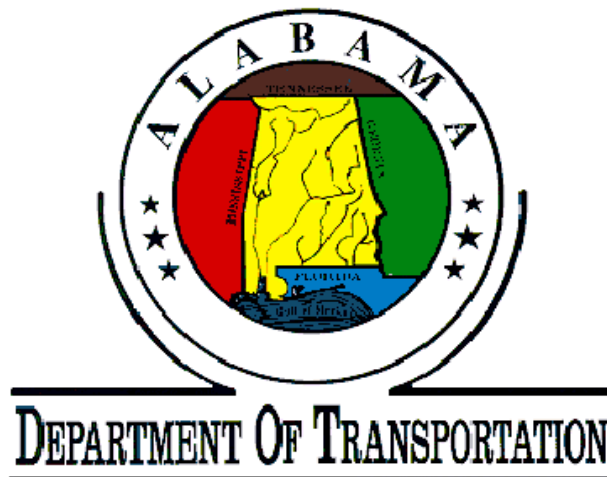
Coliseum Boulevard Plume Investigation

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FEBRUARY 2005 through APRIL 2005 STATUS REPORT

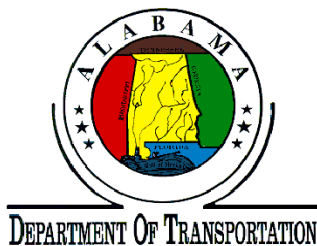
VOLUME I OF II: REPORT

COLISEUM BOULEVARD PLUME INVESTIGATION



May 26, 2005

**Submitted to:
The Alabama Department of Environmental Management
Montgomery, Alabama**



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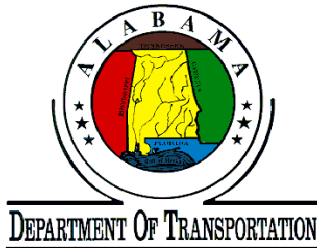


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Table 19: Results of analyses of detected VOCs and treated volumes of water from treatment system

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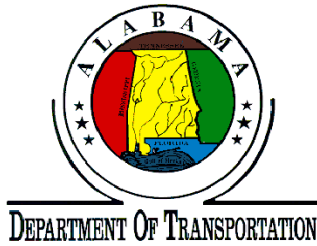
Plate

Plate 1: Concentrations in 100-, 200-, and 300-series monitoring wells on April 5 through April 25, 2005

Laboratory Reports

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Summary

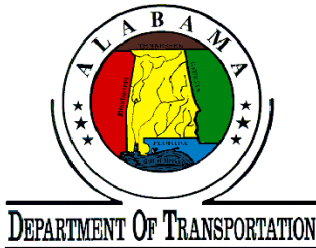
During the period between February 1, 2005, and May 18, 2005, investigations at the Coliseum Boulevard Plume (CBP) site continued.

- Routine monitoring of selected ground-water monitoring wells and continuous multi-channel tubing (CMT) wells, the Kilby Ditch and the “Low-Lying Area” were conducted in April 2005 in accordance with the approved plans and are summarized in Section I. This report contains results of samples collected through April 30, 2005, with the exception of soil and surface water samples collected on May 4, 2005, from the “Low-Lying Area”, and site-wide water levels measured on May 16, 17, and 18, 2005.
- Additional site-wide investigations continued in the Probehole (PH) 12 Area using a membrane interface probe (MIP) unit followed by soil and ground water sampling at select locations as outlined in the Addendum 14 – Additional Site-Wide Investigations. Also during this period, 7 of the cluster wells (MW-143A/243B, MW-144A/244B/244C, MW-148A/248B/248C, MW-149A/249B, MW-150A/250B/250C, MW-151A/251B, and MW-152A/252B) constructed in December 2004 and January 2005 in accordance with Addendum were developed and sampled.

Section II of this report contains information regarding the work completed by April 30, 2005.

Section III contains information about the investigation derived waste and treated water generated during this period.

Section IV contains a summary of quality assurance/ quality control (QA/QC) samples collected during this period.



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I. Routine Monitoring

Water Level Measurements

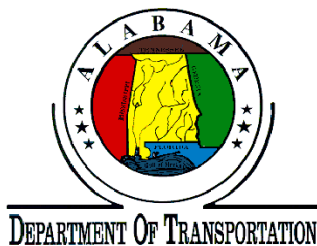
- May 16 through May 18, 2005: Depths to ground water were measured in piezometers monitoring wells, CMT wells, and pump test wells associated with the Coliseum Boulevard Plume Investigation. Depths to ground water were initially measured on April 21 through April 29, 2005, but after review of the elevations, **TTL** determined that some of the elevations did not appear to be correct. A malfunction of one of the water level indicators was suspected to be the cause. Therefore, the depths to ground water were remeasured on May 16 through May 18, 2005. The water level in piezometer PD-109 was not measured on May 16, 2005, because the well was dry. Ground-water elevations on May 16 through May 18, 2005, are provided in Tables 1a through 1f. Ground-water elevations on May 16 through May 18, 2005, in the 100- and 200-series "shallow zone" monitoring wells and piezometers are shown on Figures 1 and 2, respectively.

Depths to ground water were measured in continuous multi-channel tubing (CMT) wells 1 through 7 (see Table 2) on May 17, 2005. The water levels were not measured in CMT 3-7 and CMT 4-7 on May 17, 2005, because of an obstruction in the well ports that prevented the water level indicator cable from freely advancing through the ports.

- April 8, 2005: Depths to ground water in monitoring wells MW-101, MW-113, MW-115, MW-130, MW-131, and piezometer PZ-17 were downloaded from mini troll data loggers installed inside of these wells on April 8, 2005. The data (water level elevations on a daily basis) from the data loggers are downloaded quarterly. The mini troll data logger was not downloaded from the zoo pond because the connection to the data logger was submerged under water.

Quarterly Sampling Event (Modification to Addendum 13 Work Plan)

- On March 17, 2005, a Modification to Addendum 13 – Ground-Water Monitoring Plan was submitted to the Alabama Department of Environmental Management (ADEM). The Modification to Addendum 13 was approved by the ADEM. Based on review of the data collected from each of the sampling events conducted at the site, upward and downward trends and seasonal variations in volatile organic compounds (VOCs) detected in samples, and special and temporal variation in other parameters such as inorganics (nitrate, nitrite, sulfate, chloride, alkalinity) and dissolved gases (methane, ethane, and ethene) it was recommended that the ground-water monitoring program be modified as outlined.



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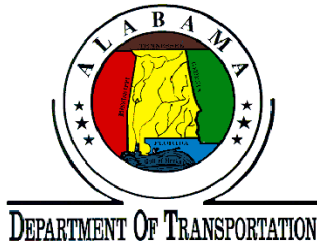
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- The new wells (MW-145A, MW-146A, MW-246B, MW-147A, MW-247B, MW-149A, MW-249B, MW-249C, MW-150A, MW-250B, MW-250C, MW-151A, MW-251B, MW-152A, and MW-252B) installed in accordance with Addendum 14 would be sampled quarterly for a minimum of one year for VOCs, inorganics, and dissolved gases (methane, ethane, and ethene) analyses. Ground-water samples also will be measured in the field for ferrous and total iron, dissolved oxygen, oxidation-reduction potential, conductivity, pH, and temperature. After one year, data collected from these wells would be evaluated to determine sampling frequency.
- The quarterly event under the Modification to Addendum 13 – Ground Water Monitoring Plan was conducted in April 2005. Ground-water samples were collected from 57 monitoring wells at the Coliseum Boulevard Plume site for analyses for VOCs.
- April 5 through April 28, 2005: During the quarterly event of the approved modified ground-water monitoring program, samples were collected from the following 57 wells located at the Coliseum Boulevard Plume (CBP) site.

MW-101	MW-116	MW-130	MW-137A	MW-244C	MW-250B
MW-201	MW-216	MW-230	MW-237B	MW-145A	MW-250C
MW-103	MW-117	MW-131	MW-237C	MW-146A	MW-151A
MW-203	MW-217	MW-231	MW-138A	MW-246B	MW-251B
MW-106	MW-123	MW-132	MW-238B	MW-147A	MW-152A
MW-206	MW-223	MW-232	MW-238C	MW-247B	MW-252B
MW-107	MW-124	MW-133	MW-143A	MW-149A	MW-341
MW-207	MW-224	MW-233	MW-243B	MW-249B	
MW-108	MW-129	MW-134	MW-144A	MW-249C	
MW-208	MW-229	MW-234	MW-244B	MW-150A	

These 57 monitoring wells were sampled and analyzed for VOCs by **TTL**'s laboratory using EPA Method 8260. The ground-water samples were measured in the field for ferrous iron and total iron using a CHEMetrics VVR photometer®.

Samples were also collected from monitoring wells MW-143A, MW-243B, MW-144A, MW-244B, MW-244C, MW-145A, MW-146A, MW-246B, MW-147A, MW-247B, MW-149A, MW-249B, MW-249C, MW-150A, MW-250B, MW-250C, MW-151A, MW-251B, MW-152A, and MW-252B and analyzed for inorganics (total alkalinity, chloride, nitrate, nitrite, and sulfate) by **TTL**'s laboratory and for dissolved gases (methane, ethane and ethene) by STL in Burlington, Virginia. The results of the analyses of detected VOCs in the ground-water samples collected from the monitoring wells are provided in Table 3. The results of the analyses for total alkalinity, chloride, nitrate, nitrite, sulfate, ferrous and total iron, methane, ethane, and ethene in the ground-water samples collected from the



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approved monitoring wells under the Modification to Addendum 13 are provided in Table 4. The concentrations of detected VOCs in ground-water samples collected from the monitoring wells are shown on Plate 1 and Figure 3. Laboratory reports of the results of the analyses of the ground-water samples collected during the month of April 2005 are provided on the attached compact disc - recordable (CD-R).

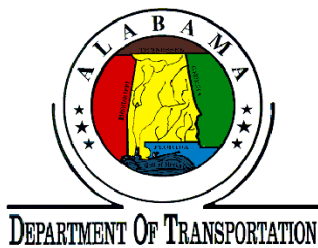
Prior to sample collection, the monitoring wells were purged using a bladder pump until field parameters (pH, conductivity, and turbidity) stabilized. Temperature and redox (ORP) were also measured in the field. The field parameter measurements during purging of the monitoring wells in the month of April 2005 are provided on the Monitoring Well Sampling Forms on the attached CD-R.

- April 2005: Ground-water samples were collected from 9 monitoring wells (MW-106, MW-206, MW-107, MW-207, MW-223, MW-130, MW-230, MW-131, and MW-231) and analyzed for total organic carbon (TOC). The results of these analyses are provided in Table 5. Laboratory reports of the results of the analyses for TOC in the ground-water samples collected during the month of April 2005 are provided on the attached CD-R.

Quarterly Sampling of the Continuous Multi-Channel Tubing (CMT) Wells

- April 25 through April 27, 2005: Ground-water samples were collected from CMT wells 1, 2, 3 and 4. Ground-water samples were not collected from CMT 3-1 (on 4/26/05) and CMT 4-1 (on 4/27/05) due to the lack of sufficient water in the CMT ports. After measuring depths to water, each port was purged using a peristaltic pump until field parameters (pH, conductivity, and turbidity) stabilized. Ground-water samples also were measured in the field for temperature, oxidation-reduction potential [redox (ORP)], ferrous [Fe (II)] and total iron. Approximately 2 to 6 gallons of water were removed from each of the CMT ports prior to sample collection. During sample collection, the tubing from the pump was disconnected and withdrawn from the port.

The water samples were collected by draining the water from the bottom end of the tubing (end previously inside the port) into the sample containers. The ground-water samples were analyzed for VOCs by TTL's laboratory. Results of analyses of detected VOCs in the ground-water samples collected from the CMT wells are provided in Table 6. Samples for total iron analyses were collected from CMT 4-3 and CMT 4-7 on April 27, 2005, for quality assurance/ quality control purposes. The results of the analyses for ferrous and total iron are provided in Table 7. Laboratory reports of these analyses and copies of Monitoring Well Sampling Forms are provided on the attached CD-R.



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Surface Water Sampling

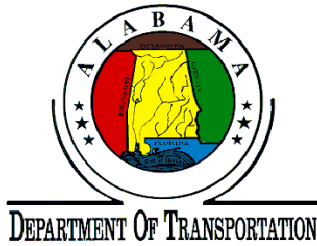
- April 27, 2005: Surface water samples were collected from the west and main branches of Kilby Ditch at five locations (compliance points CP-1, CP-2, CP-3, and monitoring points MP-1 and MP-2). On April 27, 2005, the surface water samples were collected at each location from the central part of the ditch. Figure 4 shows the locations of these five sampling points. The water samples were placed on ice and transported to TTL's laboratory for analyses for VOCs. Results of analyses of detected VOCs are provided in Table 8. The laboratory reports for the VOC analyses of the surface water samples collected on April 27, 2005, are provided on the attached CD-R. During sample collection, the water samples also were measured for temperature, pH, conductivity, dissolved oxygen, and turbidity (see Table 9).

On April 27, 2005, compliance point water samples CP-1, CP-2, and CP-3 contained 19.5J $\mu\text{g/L}$ (micrograms per liter), 10.2J $\mu\text{g/L}$, and 4.0J $\mu\text{g/L}$ of trichloroethylene (TCE). The J-flag associated with the concentration means the concentration is below the calibration curve, but above the method detection limit. TCE concentrations detected in the samples collected from CP-1, CP-2 and CP-3 on April 27, 2005, are below the action level concentration of 175 $\mu\text{g/L}$ for TCE in surface water.

Surface water samples at locations MP-1 and MP-2 contained TCE (62.2 $\mu\text{g/L}$ and 28.0 $\mu\text{g/L}$, respectively) on April 27, 2005. There also was detection of 1,1-Dichloroethene (1.6J $\mu\text{g/L}$) and cis-1,2-Dichloroethene (3.9J $\mu\text{g/L}$) in the surface water sample collected from MP-1 on April 27, 2005. Monitoring point MP-2 also contained cis-1,2-Dichloroethene (1.2J $\mu\text{g/L}$) on April 27, 2005.

Low – Lying Area (Addendum 04 Work Plan)

- May 4, 2005: On May 4, 2005, soil/sediment and surface-water samples were collected from locations N, O, and P in the "Low-Lying Area". Results of the analyses for VOCs in the soil/sediment and surface water samples collected from locations N, O, and P on May 4, 2005, are provided in Tables 10 and 11, respectively. Laboratory reports of these analyses are provided on the attached CD-R.

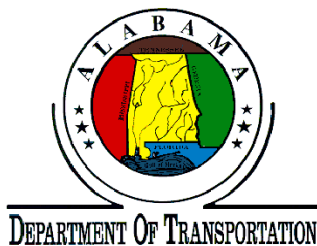


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II. Additional Site-Wide Investigations

- On February 13, 2004, an addendum (Addendum 14) was submitted to the ADEM to conduct additional site-wide investigations. The additional site-wide investigations plan was approved by the ADEM and is outlined as follows:
 - quantify, via aquifer testing, the hydrogeologic characteristics of the first water-bearing zone near the confluence of the west Kilby Ditch with the main Kilby Ditch,
 - quantify, via aquifer testing, the hydrogeologic characteristics of the first water-bearing zone in the southwest quadrant of the Coliseum Boulevard Plume (CBP) Site,
 - construct “nested” monitoring wells to characterize the vertical distributions of TCE and hydraulic gradients in selected areas within the CBP Site,
 - delineate the outermost boundaries of the TCE plume in selected areas,
 - delineate a “lobe” of TCE that is outside the Probehole 12 Area,
 - verify the horizontal extent of the area that has been determined to contain at least 10,000 parts per billion (ppb) of dissolved TCE within the Probehole 12 Area,
 - characterize further the horizontal and vertical distributions of dissolved TCE within the area encompassed by the 10,000 ppb contour of the Probehole 12 Area, and
 - evaluate the concentrations of TCE within the 10,000 ppb contour to assess zones and/or areas that might contain residual TCE.
- February 1 through April 6, 2005: On September 30, 2004, field investigations were begun to determine the extent of residual liquid TCE, if any, in the subsurface within the Probehole 12 area. These investigations incorporate the use of a Membrane Interface Probe (MIP), which comprises a soil-conductivity probe and a membrane that is permeable to molecules of TCE. The soil-conductivity probe is used to characterize lithologies qualitatively and the permeable membrane is used to detect liquid TCE. The MIP probe is configured so that molecules of TCE can be conveyed to the land surface for analysis with a gas chromatograph that is equipped with both a photoionization detector and an electron-capture detector. Responses from both detectors are recorded continuously as the probe is pushed/hammered into the subsurface. After completion of several MIP “pushes”, a geoprobe was used to collect samples of soil and ground water for comparisons to the MIP responses. Locations where soil/ground-water samples were collected during the month of February 2005 (locations A41, A44, A59, A60, A61, A62 through A79) and March 2005 (A53, A55, A80 and A81) are shown on Figure 7. When soil/ground-water samples were collected, an additional probehole was pushed about 5 feet from the MIP probehole. The soil samples were preserved, in the field, with



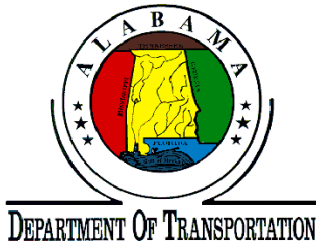
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methanol. The concentrations of TCE within the soil samples subsequently are being analyzed with the computerized model "NAPANAL" to check for the presence of liquid TCE. One hundred and eight ground-water samples were collected during field activities from locations A41, A44, A55, A59, A61, A63, A70, A72, A73, A74, A75, A80, and A81, and were analyzed for VOCs. The results of the analyses for VOCs in the ground-water samples are provided on Table 12. Soil samples were also collected from location A63 at various depths below land surface on March 3, 2005, for fractional organic carbon (FOC) analyses (see Table 13). Laboratory reports of these analyses and copies of the MIP and conductivity logs are provided on the attached CD-R. During this work interval (February through April 2005) 14 MIP probeholes were completed. This completes this phase of the work. A full report will be prepared once the computerized model "NAPANAL" to check for the presence of liquid TCE is finalized.

In addition to the MIP work conducted within the Probehole 12 area, 10 probeholes (identified as PH126 through PH136) were installed around the perimeter of the investigation area (see Figure 8). Ground-water samples were collected from probeholes PH 132 through PH 136, and were analyzed for VOCs (see Table 12). Soil samples were collected from probehole PH132 at various depths for VOCs analyses on March 31, 2005. The results of the analyses for VOCs in the soil samples are provided in Table 14. Laboratory reports of these analyses and copies of the MIP and boring logs are provided on the attached CD-R.

- **February 2005:** Ten nested monitoring wells (MW-143A/243B, MW-144A/244B/244C, MW-145A, MW-146A/246B, MW-147A/247B, MW-148A/248B/248C, MW-149A/249B/249C, MW-150A/250B, MW-151A/251B, and MW-152A/252B), and two pump test wells (PW-3 and PW-4) were installed in December 2004 and January 2005 at the CBP project site. The locations of these new nested wells and pump test wells are shown on Plate 1. During February 2005, monitoring wells MW-143A, MW-243B, MW-144A, MW-244B, MW-244C, MW-148A, MW-248B, MW-248C, MW-149A, MW-249B, MW-249C, MW-150A, MW-250B, MW-250C, MW-151A, MW-251B, MW-152A, and MW-252B were developed and ground-water samples were collected and analyzed for VOCs, total alkalinity, chloride, nitrate, nitrite, sulfate, methane, ethane, and ethene analyses. The ground-water samples also were measured in the field for ferrous iron and total iron using a CHEMetrics VVR photometer[®]. Results of analyses of detected VOCs in the ground-water samples collected from these 18 monitoring wells in February 2005 are provided on Table 3. The results of analyses for total alkalinity, chloride, nitrate, nitrite, sulfate, ferrous and total iron, methane, ethane, and ethene are provided on Table 4. Laboratory reports of these analyses and copies of the monitoring development and sampling forms are provided on the attached CD-R.



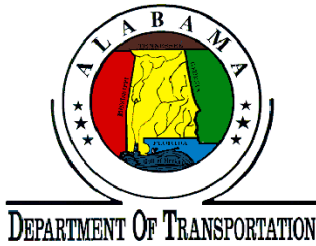
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Aquifer Tests at pump wells PW-3 and PW-4 (Addendum 14)

- March 28, 2005: Ground-water samples for VOCs, total alkalinity, chloride, nitrate, nitrite, sulfate, methane, ethane, and ethene analyses were collected from pump test wells PW-3 and PW-4 on March 28, 2005. Pump test well PW-3 is located near the Kilby Ditch area, and pump test well PW-4 is located on private property adjacent to Lower Wetumpka Road (on the former Christian Lab property). The results of analyses for VOCs detected in the pump test wells are provided on Table 15, and shown on Plate 1. The results of analyses for total alkalinity, chloride, nitrate, nitrite, sulfate, ferrous and total iron, methane, ethane, and ethene are provided on Table 16.
- April 8 and April 21, 2005: On April 8, 2005, a step test was performed at well PW-4, which is on the property of the former Christian Laboratory, adjacent to Lower Wetumpka Road. Results of the step test were used to determine the pumping rate to be used in the 72-hour aquifer test at PW-4. On April 25, 2005, a step test was performed at well PW-3, which is on ALFA property, about 150 feet north of the west branch of Kilby Ditch. Results of the step test were used to determine the pumping rate to be used in the 72-hour aquifer test at PW-3.
- April 12 through April 15, 2005: On April 12, 2005, a 72-hour aquifer test was initiated at well PW-4. Prior to the aquifer test (on April 8, 9, and 10, 2005) antecedent water levels were measured with a water level indicator in monitoring wells MW-148A, MW-248B, and MW-248C. On April 12, 2005, a Signature 2000 (2 horsepower pump with a maximum capacity of 85 gallons per minute) was placed in well PW-4. The intake of the pump was placed about two feet above the bottom of well PW-4 which is 82 feet below land surface. A Hermit 3000 data logger equipped with 7 transducers was used to record water level measurements during the pump test (see Table 17) which began at 10:20 AM on April 12, 2005. A transducer was placed in the pumping well (PW-4) and in each of nearby on-site observation/monitoring wells (MW-111, MW-211, MW-311, MW-148A, MW-248B, and MW-248C). Immediately prior to the pump test the flow meter reading was 298,248 gallons. The aquifer test was terminated at 10:20 AM on April 15, 2005. The flow meter reading after 72 hours, prior to the recovery test, was 466,096 gallons. Thus, 167,848 gallons of water were pumped from well PW-4 within a 72-hour period, with an average pump rate of about 40 gallons per minute.

During the aquifer test water levels were recorded using mini trolls outlying monitoring wells MW-117 and MW-217 (located on Broadway Street), MW-221 (Amanda Drive), and MW-123 and MW-223 (Harris Street). Beginning at approximately 1:00 PM on April 13, 2005, manual water level measurements were recorded approximately every 2 hours (during daylight) in monitoring wells MW-221, MW-123 and MW-223 to substantiate the accuracy of the mini troll data being collected.



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The recovery test began at 10:41 AM on April 15, 2005, and was terminated at 2:24 PM on April 16, 2005. During the aquifer test, water was pumped from well PW-4 into an approximately 21,000-gallon frac tank. Water was treated with an on-site activated carbon treatment prior to discharge into a sanitary sewer inlet behind the former Christian Lab building. Water samples were collected from well PW-4 at different time intervals (30 minutes, and 4, 24, 48, and 72 hours) during the aquifer test, and analyzed for VOCs. Samples of the treated water were also collected from an effluent sample port on the water treatment system in the morning and evening hours of each day of the 72-hour aquifer test, and analyzed for VOCs. The results of the analyses of VOCs detected are provided in Table 15. The following parameters were checked and recorded hourly during the aquifer test:

- Value of the flow water meter and flow rate
 - Vapor concentrations, oxygen, and lower explosive limits (LEL) at an opening at the top of the frac tank
 - Pressure gauge of pump and pressure gauges on water treatment system
- April 25 through April 28, 2005: On April 25, 2005, a 72-hour aquifer test was initiated at well PW-3. On April 21, 2005, mini trolls were placed in well PW-3 and in nearby observation/monitoring wells MW-146A and MW-246B to record antecedent water level measurement prior to the aquifer test. A Dayton ½ horsepower submersible pump with a maximum capacity of 16 gallons per minute was placed in well PW-3. The intake of the pump was placed about two feet above the bottom of well PW-3 which is 23.5 feet below land surface. A Hermit 3000 data logger equipped with 7 transducers was used to record water level measurements (see Table 18) during the aquifer test which began at 4:30 PM on April 25, 2005. A transducer was placed in the pumping well (PW-3) and in each of observation/monitoring wells MW-146A, MW-246B, MW-147A, MW-247B, and MW-202 (all located near the Kilby Ditch). A transducer also was placed inside a slotted two-inch diameter PVC pipe that was inserted in the main Kilby Ditch to record water levels in the ditch. The flow meter reading immediately prior to the pump test was 32,119 gallons. The pump test was terminated at 4:30 PM on April 28, 2005. The flow meter reading after 72 hours, prior to the recovery test, was 54,849 gallons. Thus, 22,730 gallons of water was pumped from well PW-3 with a 72-hour period, with an average pump rate of about 5.3 gallons per minute.

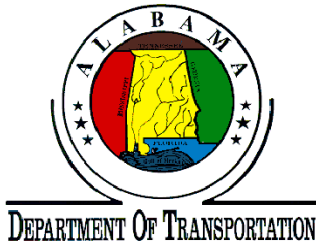
During the aquifer test water levels were recorded using mini trolls in outlying monitoring wells MW-102 (north of west branch of Kilby Ditch) and in monitoring wells MW-103, MW-203, MW-143A, and MW-243B (south of the west branch of Kilby Ditch). During the aquifer test, manual water level measurements were recorded once a day in these monitoring wells to substantiate the accuracy of the mini troll data collected.



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The recovery test began at 4:37 PM on April 28, 2005, and was terminated at 8:03 AM on April 29, 2005. A total of 22,730 gallons of water was pumped from well PW-3. During the aquifer test, water was pumped from well PW-3 into an approximately 21,000-gallon frac tank. The water was pumped from the frac tank into an on-site water treatment system equipped with activated carbon filters. After treatment, the water was discharged into a sanitary sewer inlet about 30 feet east of well PW-3. Water samples were collected from well PW-4 at different time intervals (30 minutes, and 4, 24, 48, and 72 hours) during the aquifer test, and analyzed for VOCs. Samples of the treated water were also collected from an effluent sample port on the water treatment system in the morning and evening hours of each day of the 72-hour aquifer test, and analyzed for VOCs. The results of the analyses of VOCs detected are provided in Table 15. The parameters checked and recorded hourly during the aquifer test conducted in PW-4 were repeated during the aquifer test at well PW-3. The parameter data is being reviewed and will be included in the aquifer test report.



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III. Investigation Derived Waste

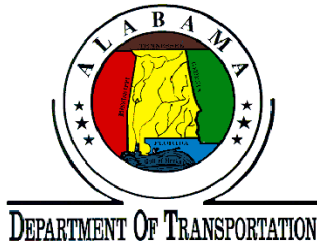
Trash Roll-off box and Water Roll-off box

- April 29, 2005: Investigation derived waste (IDW) generated during field activities was placed in a trash roll-off box and water roll off box. A sample of the IDW was collected on from both roll off boxes on April 29, 2005, and analyzed for TCLP (toxicity characteristic leaching procedure). TCE was not detected in the samples collected on April 29, 2005. The results of the roll off box and water roll off box are provided on the attached CD-R.

Water Treatment

- February and March 2005: Water accumulated during cleaning of sampling equipment, and purging and sampling of monitoring wells, was treated through a liquid-phase carbon filter treatment system at the ALDOT staging area. A total of 5,950 gallons of water was treated during the months of February 2005 and March 2005 (see Table 19). The treated water was discharged into the sanitary sewer at the staging area. During treatment of the water, samples were collected from water discharged from the first carbon filter to monitor for breakthrough on February 23, 28, and March 16, 2005, and the third carbon filter to monitor for compliance with the Montgomery Water Works and Sanitary Sewer Board discharge requirements. Samples were collected from the second carbon filter on March 30 and March 31, 2005, due breakthrough observed at carbon filter 1, and samples were collected from carbon filter 3. The water samples were submitted for VOC analyses. Results of analyses of detected VOCs and volumes of treated water are provided in Table 19. Laboratory reports of the analytical results for samples collected in February 2005 through April 2005 are on the attached CD-R.

Purged water from the aquifer tests conducted at pump wells PW-3 and PW-4 was treated by an on-site water treatment system equipped with activated carbon filters. After the water was treated at PW-4, it was discharged into a sanitary sewer inlet behind the former Christian Laboratory building. The water treated at PW-3 was discharged into a sanitary sewer inlet about 30 feet east of well PW-3.



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IV. Quality Assurance/Quality Control

- During the April 2005 quarterly ground-water sampling event, duplicate ground-water samples were collected from monitoring wells MW-108, MW-208, MW-132, MW-224, MW-243B, MW-247B, and CMT 2-4, and CMT 4-5 and analyzed for VOCs. The duplicate sample results are shown with the parent sample results (see Tables 3 and 6). Samples collected from monitoring wells MW-243B and MW-247B were analyzed for inorganic (alkalinity, chloride, nitrate, nitrite, and sulfate) by **TTL** and dissolved gases (methane, ethane, and ethene) by **STL**. Ground-water samples also were collected from MW-103, MW-106, MW-116, MW-224, MW-246B, CMT 4-3 and CMT 4-7 and shipped to **TTL's** laboratory to be analyzed for total iron for quality assurance/quality control purposes (see Tables 4 and 7). Equipment rinse samples were collected and trip blank samples accompanied water samples that were submitted for analyses for VOCs in months of February, March and April 2005. Results of analyses of detected VOCs in the rinse and trip blank samples are provided in Table 20. Laboratory reports of the analyses are provided on the attached CD-R.